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| 09/700,908 | 11/21/2000 | Mitsuo Watanabe | 001539 | 3329 |

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| EXAMINER | |
|---|---|
| AUGHENBAUGH, WALTER | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1772 | |

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/700,908 | WATANABE ET AL. | |
| | Examiner | Art Unit | |
| | Walter B Aughenbaugh | 1772 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12 and 14-25* is/are pending in the application.

4a) Of the above claim(s) *1-10 and 18-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,12,14-17 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Acknowledgement of Applicant's Amendments*

1. The amendments to claims 11, 12, 14-17 and 25 made in the Amendment filed December 23, 2003 (Amdt. D) have been received and considered by Examiner.

2. The cancellation of claim 13 in Amdt. D has been acknowledged by Examiner.

### *WITHDRAWN REJECTIONS*

3. The 35 U.S.C. 112 rejection of claim 25 made of record in paragraph 8 of Paper 18 has been withdrawn due to Applicant's amendments to claim 25 in Amdt. D.

4. The 35 U.S.C. 102 rejection of claim 13 that was repeated in paragraph 5 of Paper 18 has been withdrawn due to Applicant's cancellation of claim 13 in Amdt. D.

5. The 35 U.S.C. 102 rejection of claims 25, 11, 12 and 16 that was repeated in paragraph 5 of Paper 18 has been withdrawn due to Applicant's amendments in Amdt. D.

6. The 35 U.S.C. 103 rejections of claims 14 and 17 that were repeated in paragraphs 6 and 7 of Paper 18, respectively, have been withdrawn due to Applicant's amendments in Amdt. D.

7. The 35 U.S.C. 103 rejection of claim 15 made of record in paragraph 9 of Paper 18 has been withdrawn due to Applicant's amendments in Amdt. D.

### *NEW REJECTIONS*

#### *Claim Rejections - 35 USC § 112*

8. Claims 25 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regard to claim 25, the "the bending strength and modulus of bending elasticity and the Izod impact strength" of what "are increased"? The structure and/or

composition intended be recited by the phrase "conventional glass fiber reinforced ABS" cannot be ascertained; what it is about the "glass fiber reinforced ABS" that makes the "glass fiber reinforced ABS" conventional? That which is intended to be recited by "ABS" should be spelled out in full (or insert "(ABS)" between "acrylonitrile-butadiene-styrene" and "resin" in the fifth line of claim 25). Claim 16 recites the limitation "said resin selected from acrylonitrile-butadiene-styrene resin and acrylonitrile-styrene resin"; there is insufficient antecedent basis for this limitation in the claim: claim 25, upon which claim 16 depends, does not recite that a resin is "selected from" acrylonitrile-butadiene-styrene resin and acrylonitrile-styrene resin.

***Claim Rejections - 35 USC § 102***

9. Claims 25, 11, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa.

In regard to claim 25, Nakagawa teaches a synthetic resin container (paragraph 01) that corresponds to the synthetic resin molded article as claimed comprising an acrylic resin sheet (the surface layer as claimed) and an injection molded thermoplastic reinforcement layer (the outer reinforcing shell layer as claimed) (paragraphs 08 and 48). Nakagawa teaches that the surface layer is a twice thermoformed layer (paragraphs 28, 30 and 31, note especially paragraph 30). Nakagawa teaches that the acrylic resin sheet is spread in both the longitudinal and transverse directions since Nakagawa teaches that pressure is applied to it on both sides in a softened state and that it is thermoformed to the configuration of a bathtub (paragraphs 26-28). Nakagawa teaches acrylonitrile-butadiene-styrene (ABS) resin as the plastic of the thermoplastic reinforcement layer (paragraphs 19 and 34), and therefore teaches that the container comprises ABS resin as claimed by Applicant. ABS resin is an acrylonitrile-styrene resin, i.e. a resin

containing acrylonitrile and styrene mononmers, and therefore Nakagawa teaches that the container comprises acrylonitrile-styrene resin as claimed by Applicant. Nakagawa teaches that the acrylonitrile-butadiene-styrene thermoplastic outer reinforcing shell layer comprises glass fibers having a length of about 1-6mm (paragraphs 20, 22 and 34-38), a range that overlaps with the claimed range of 5 to 10mm. Nakagawa teaches that the acrylic resin sheet (the surface layer as claimed) is coated with the thermoplastic reinforcement layer (the outer reinforcing shell layer as claimed) (paragraph 08) and therefore teaches a structure that is equivalent to that recited by the phrase "outer reinforcing shell layer integrally molded to one surface of said surface layer" as claimed by Applicant. The recitation "the bending strength and modulus of bending elasticity and the Izod impact strength are increased over conventional glass fiber reinforced ABS" (lines 8-9) is a method limitations that has not been given patentable weight since the method of forming the article is not germane to the issue of patentability of the article itself; note particularly the phrase "are increased over" which recites a method step.

In regard to claim 11, Nakagawa teaches that the acrylic resin sheet is transparent (paragraph 23). Nakagawa teaches that additives such as bulking agents (i.e., fillers) and coloring agents are added to the thermoplastic outer reinforcing shell layer requisite to need (paragraph 35-36). Nakagawa teaches that marble patterns are made in the thermoplastic outer reinforcing shell layer, and that the thermoplastic outer reinforcing shell layer is colored (paragraph 23). In regard to claim 12, Nakagawa teaches that the acrylic resin sheet is colored (paragraph 16). In regard to claim 16, Nakagawa teaches that glass fibers having a length of about 1-6mm (a range that overlaps with the claimed range of 400 to 1000μm) are used to raise

rigidity of the acrylonitrile-butadiene-styrene thermoplastic outer reinforcing shell layer (paragraphs 20, 22 and 34-38).

***Claim Rejections - 35 USC § 103***

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of Adams et al., and in further view of Akamatsu.

Nakagawa teaches the patterned article as discussed above. Nakagawa teaches that marble patterns are made in the thermoplastic outer reinforcing shell layer (paragraph 23). Nakagawa fails to teach that the surface layer is made of translucently or transparently colored ABS resin or AS resin. Adams et al., however, teach an assembled sanitaryware article with appearance component 1 (Figures 1 and 2 and col. 3, lines 29-35). Examples of sanitaryware vessels are given on col. 1, lines 5-10). Adams et al. teach that sanitaryware appearance components are formed from acrylonitrile-butadiene-styrene (col. 3, lines 41-47). Figures 1 and 2 show that appearance component 1 is the structural analog of applicants' surface layer, i.e., both the appearance component 1 of Adams et al. and the surface layer of applicants would be in contact with any material (such as water) that is placed inside the molded article. Furthermore, Akamatsu teach molded articles formed from translucent acrylonitrile-butadiene-styrene (ABS) resin (col. 7, lines 46-47); thus, Akamatsu establish that it is notoriously well known that acrylonitrile-butadiene-styrene (ABS) resin is available as a translucent resin. Therefore, one of ordinary skill in the art would have recognized to use translucent ABS resin as the material of the surface layer of Nakagawa since Adams et al. teach that it is notoriously well known to use ABS resin as the material for sanitaryware vessels that are exposed to any material that is held in the

vessel, and since Akamatsu establish that it is notoriously well known that acrylonitrile-butadiene-styrene (ABS) resin is available as a translucent resin.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used translucent ABS resin as the material of the surface layer of Nakagawa since Adams et al. teach that it is notoriously well known to use ABS resin as the material for sanitaryware vessels that are exposed to any material that is held in the vessel, and since Akamatsu establish that it is notoriously well known that acrylonitrile-butadiene-styrene (ABS) resin is available as a translucent resin.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of Stier et al.

Note that the recitation "obtained by subjecting said surface layer to thermoforming twice when said outer reinforcing shell layer is subjected to an injection molding" is a method limitation and has not given patentable weight, since the method of forming the surface layer and the outer reinforcing shell layer is not germane to the issue of patentability of the surface layer and the outer reinforcing shell layer itself.

Nakagawa teaches the article as discussed above. Nakagawa fails to teach that the surface layer is provided with a skid-preventing texture. Stier et al., however, teach a prefabricated, slip-resistant surface coating comprising film (item 16) that has embedded in the film (item 16) a plurality of finely-divided abrasive materials (col. 2, line 63-col. 3, line 5 and Figure 2). Stier et al. teach the application of the slip-resistant surface coating to a bathtub (Figure 3 and col. 4, lines 31-39) to reduce the hazard presented by wet bathtubs (col. 1, lines 15-16). Therefore, one of ordinary skill in the art would have recognized to apply the slip-resistant

surface coating of Stier et al. to the acrylic resin sheet of the molded article of Nakagawa in order to provide a skid-preventing texture to the acrylic resin sheet and to consequently reduce the hazard presented by wet bathtubs as taught by Stier et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the slip-resistant surface coating of Stier et al. to the acrylic resin sheet of the molded article of Nakagawa in order to provide a skid-preventing texture to the acrylic resin sheet and to consequently reduce the hazard presented by wet bathtubs as taught by Stier et al.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of Seymour et al.

Nakagawa teaches the article as discussed above. Nakagawa fails to teach that the reinforcing layer is formed integrally with a reinforcing rib of increased thickness in relation to the thickness of the remainder of the outer reinforcing shell layer. Seymour et al., however, teach a bathtub made of fiber glass reinforced plastic, the bottom of which is preferably reinforced with molded ribs (col. 4, lines 9-11 and lines 18-19). The outer reinforcing shell layer, at the location of the molded ribs, necessarily has an increased thickness in relation to the thickness of the remainder of the outer reinforcing shell layer due to the structure of ribs molded into a plastic layer. Furthermore, Seymour et al. teach a back wall with molded-in ribs which give added strength and allow the major portion of the assembly to be made of thinner fiber glass reinforced plastic without sacrificing performance (col. 4, lines 38-43). One of ordinary skill in the art would have recognized to apply the concept of the use of molded-in ribs in the back wall of the construction to allow for the use of thinner plastic sheets without sacrificing strength

properties to the bathtub of the construction. Therefore, one of ordinary skill in the art would have recognized to have formed the outer reinforcing layer of Nakagawa with an integrally formed rib or with integrally formed ribs in order to allow for the use of thinner plastic sheets without sacrificing strength properties to the bathtub of the construction as taught by Seymour et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the outer reinforcing layer of Nakagawa with an integrally formed rib or with integrally formed ribs in order to allow for the use of thinner plastic sheets without sacrificing strength properties to the bathtub of the construction as taught by Seymour et al.

***ANSWERS TO APPLICANT'S ARGUMENTS***

13. Applicant's arguments presented on pages 12-14 of Amdt. D in regard to the alleged inapplicability of Nakagawa to the claims as amended have been fully considered but are not persuasive. On page 12 of Amdt. D, Applicant states that claim 25 "specifically recites stretched (spread) plastic"; however, while claim 25 does recite that the surface layer is a spread surface layer, claim 25 does not recite that the surface layer is stretched. Recitation of the term "spread" is not equivalent to the recitation of the term "stretched". A "spread" layer is certainly not necessarily a stretched layer, and furthermore, the term "spread" per se does not suggest the term "stretched". The term "spread" conjures images of butter being spread on toast and of a tablecloth being spread on a table; neither of these actions involves stretching. On pages 12 and 13, Applicant argues that Nakagawa "does not disclose stretched plastic" but this argument is irrelevant since the claims do not recite that the article comprises "stretched plastic". The limitation on which Applicant's arguments relies (i.e. "stretched plastic") is not stated in the

claims. It is the claims that define the claimed invention, and it is the claims, not specifications that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

In the last paragraph of page 13, the first three lines of page 14 and the first three lines of page 15 of Amdt. D, Applicant argues essentially that stretched plastic has superior properties to unstretched plastic, but this argument is irrelevant because the claims do not recite that the article comprises "stretched plastic". It is not at all clear from the portions of the specification that Applicant has cited as support for the amendments to the claims in Amdt. D that the spread acrylic resin sheet (line 4 of page 14) is a stretched acrylic resin sheet, or that the spread acrylic resin sheet has superior properties due to the fact that the spread acrylic resin sheet is spread (as opposed to unspread).

14. Applicant's argument presented on pages 14-15 of Amdt. D that the Adams et al., Akamatsu, Stier et al. and Seymour et al. patents do not disclose "spread plastic" have been fully considered but are not persuasive because this argument is irrelevant since the claims do not recite that the article comprises "stretched plastic".

15. The phrase "twice thermoformed" is a method limitation that does not positively recite anything in regard to the structure of the article and therefore Applicant's argument on page 14 of Amdt. D that Adams et al. does not disclose "twice thermoformed spread plastic" is irrelevant.

16. Applicant's argument on page 15 of Amdt. D that "using long lass fibers can improve the product and working conditions for making the product [is] nowhere disclosed or suggested by the references" is irrelevant because Nakagawa teaches the claimed structural limitations regarding the glass fibers (i.e. as stated above in this Office Action, Nakagawa teaches that the acrylonitrile-butadiene-styrene thermoplastic outer reinforcing shell layer comprises glass fibers

having a length of about 1-6mm (paragraphs 20, 22 and 34-38), a range that overlaps with the claimed range of 5 to 10mm).

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 571-272-1488. The examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm and on alternate Fridays from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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